

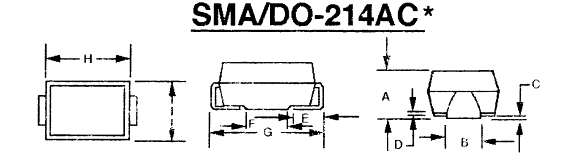
SK12 THRU SK110

1.0 AMP. SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

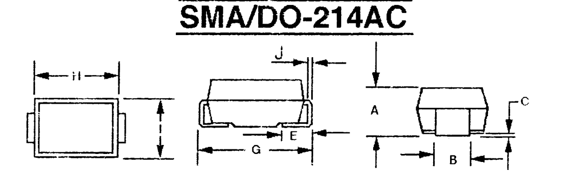


VOLTAGE RANGE
20 to 100 Volts
CURRENT
1.0 Ampere

SMA/DO-214AC*



SMA/DO-214AC



FEATURES

* For surface mounted application
* Metal to silicon rectifier, majority carrier conduction
* Low forward voltage drop
* Easy pick and place
* High surge current capability
* Plastic material used carries Underwriters Laboratory classification 94V-O
* Epitaxial construction
* Extremely Low Thermal Resistance

MECHANICAL DATA

* CASE: Molded plastic
* Terminals: Solder plated
* Polarity: Indicated by cathode band
* Packaging: 12mm tape per EIA STD RS-481
* Weight: 0.091 grams(SMA/DO-214AC*)
  0.064 grams(SMA/DO-214AC)

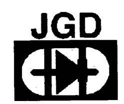
DIMENSIONS				
	SMA/DO-214AC*		SMA/DO-214AC	
	inches	mm	inches	mm
A	.078 to .90(L)	1.98 to 2.29(L)	.078 to .090	1.98 to 2.29
A	.110 to .117(H)	2.80 to 2.98(H)		
B	.067 to .088	1.7 to 2.24	.052 to .058	1.32 to 1.47
C	.008MAX	.20MAX	.008MAX	.20MAX
D	.02MAX	.51MAX		
E	.030 to .060	.76 to 1.52	.030 to .050	.76 to 1.27
F	.067 to .094	1.65 to 2.39		
G	.204 to .220	5.21 to 5.59	.194 to .208	4.93 to 5.28
H	.160 to .179	4.06 to 4.55	.157 to .177	3.99 to 4.50
I	.101 to .112	2.56 to 2.85	.100 to .110	2.54 to 2.79
J			.006 to .012	.152 to .305

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25℃ ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%

TYPE NUMBER	SYMBOLS	SK12	SK13	SK14	SK15	SK16	SK18	SK110	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	20	30	40	50	60	80	100	V
Maximum RMS Voltage	V_{RMS}	14	21	28	35	42	56	70	V
Maximum DC Blocking Voltage	V_{DC}	20	30	40	50	60	80	100	V
Maximum Average Forward Rectified Current $T_L = 90℃$	$I_{F(AV)}$	1.0							A
Peak Forward Surge Current, (8.3ms half sine)	I_{FSM}	40							A
Maximum Instantaneous Forward Voltage @ 1.0A(NOTE 1)	V_F	0.45	0.55	0.60	0.72		0.80		V
Maximum D.C Reverse Current @ $T_A = 25℃$	I_R	0.5							mA
at Rated D.C. Blocking Voltage @ $T_A = 100℃$		10							
Typical Thermal Resistance (NOTE 2)	$R_{\theta JL}$	15							℃/W
Typical Junction Capacitance (NOTE 3) SK12	C_J	230							pF
Typical Junction Capacitance (NOTE 3) SK13 ~ SK110		50							
Operating and Storage Temperature Range	T_J / T_{STG}	−65 to +125 / −65 to +150							℃

NOTE 1. Pulse test: Pulse width 300 μsec, Duty cycle 2%
2. P.C.B mouted 0.2×0.2″(5.0×5.0mm) copper pad areas.
3. Measured at 1MHz and applied $V_R = 4.0V$ D.C.



RATINGS AND CHARACTERISTIC CURVES (SK12)

Figure 1 – TYPICAL FORWARD CHARACTERISTICS

Amps: 100, 80, 60, 40, 20, 10, 8.0, 6.0, 4.0, 2.0, 1.0, .8, .6, .4, .2, .1

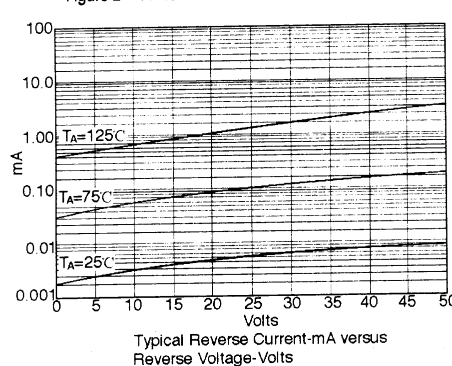
125℃ 25℃

0 .2 .4 .6 .8 1.0 1.2 1.4

Volts

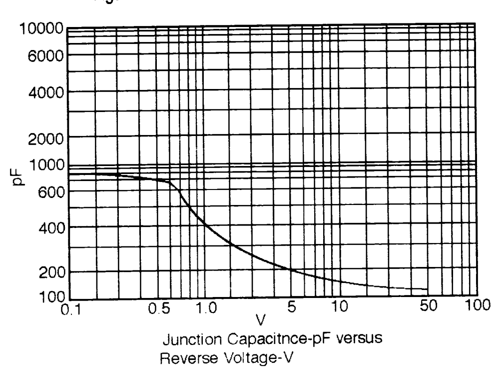
Instantaneous Forward Current-Amperes versus
Instantaneous Forward Voltage-Volts

Figure 2 – TYPICAL REVERSE CHARACTERISTICS



Typical Reverse Current-mA versus
Reverse Voltage-Volts

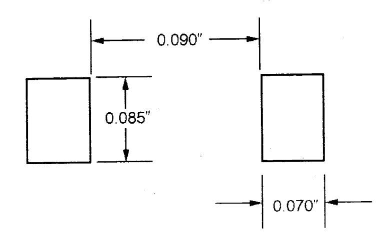
Figure 3 – TYPICAL JUNCTION CAPACITANCE

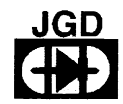


Junction Capacitnce-pF versus
Reverse Voltage-V

SUGGESTED SOLDER

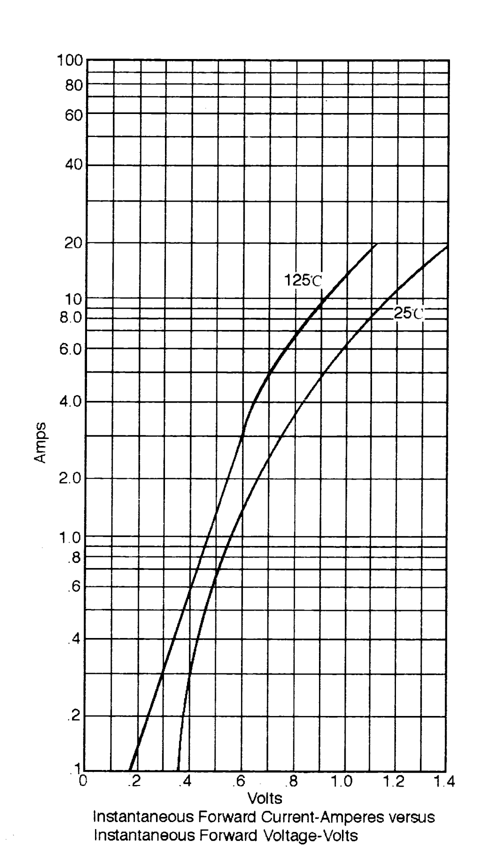
PAD LAYOUT





RATINGS AND CHARACTERISTIC CURVES (SK13 THRU SK16)

Figure 1
TYPICAL FORWARD CHARACTERISTICS



Instantaneous Forward Current-Amperes versus
Instantaneous Forward Voltage-Volts

Figure 2 – TYPICAL REVERSE CHARACTERISTICS

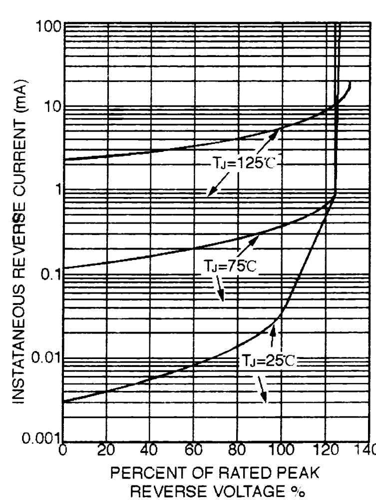
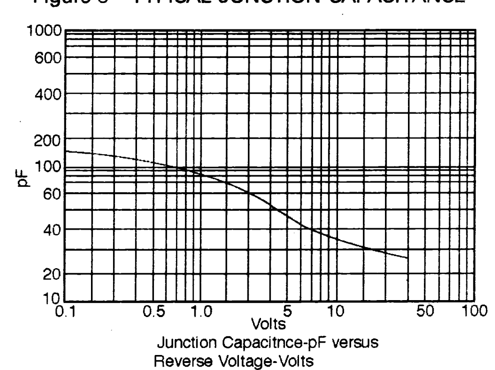
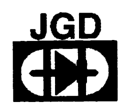


Figure 3 – TYPICAL JUNCTION CAPACITANCE

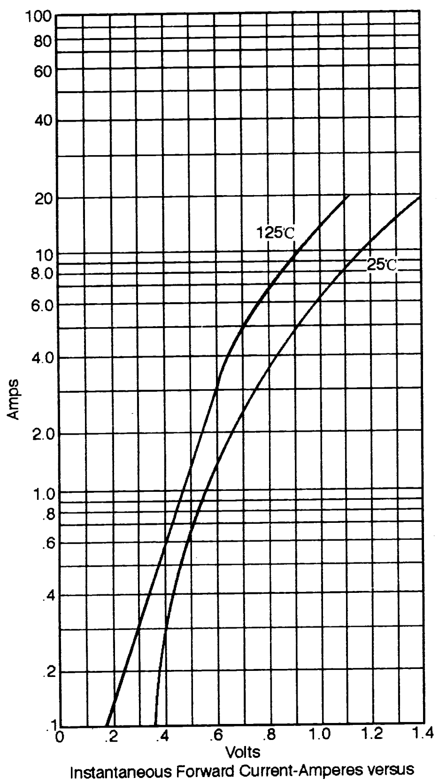


Junction Capacitnce-pF versus
Reverse Voltage-Volts



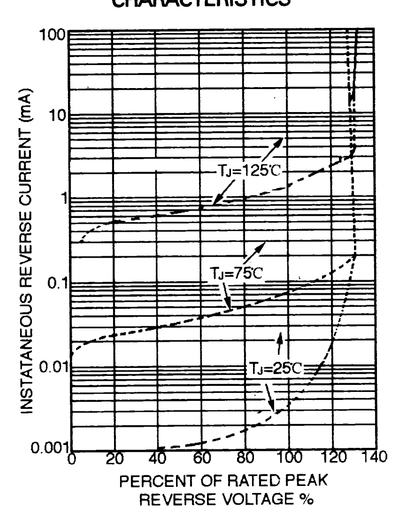
RATINGS AND CHARACTERISTIC CURVES (SK18 THRU SK110)

Figure 1
TYPICAL FORWARD CHARACTERISTICS



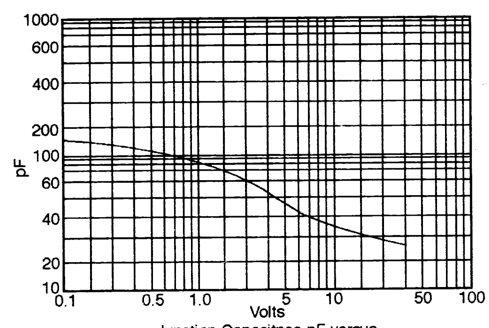
Instantaneous Forward Current-Amperes versus
Instantaneous Forward Voltage-Volts

Figure 2 – TYPICAL REVERSE CHARACTERISTICS



PERCENT OF RATED PEAK
REVERSE VOLTAGE %

Figure 3 – TYPICAL JUNCTION CAPACITANCE



Junction Capacitnce-pF versus
Reverse Voltage-Volts